

REMARKS

This is in full and timely response to the non-final Office Action dated April 19, 2005 (Paper No. 3). The present Amendment amends the specification to address minor matters of form. No new matter has been added. Accordingly, claims 1, 3, 5 and 7 are presently pending in the application, each of which is believed to be in condition for allowance. Reexamination and reconsideration in light of the present Amendment and the following remarks are respectfully requested.

Drawings:

Acceptance of the drawings is noted with appreciation.

Claim to Priority

Acknowledgement of the proper receipt of the certified formal papers filed in connection with Applicant's claim to priority under 35 U.S.C. § 119(a)-(d) is noted with appreciation.

Claim Rejections- 35 U.S.C. § 103

In the Action, claim 1 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,853,435 to Tanaka ("Tanaka") in view of U.S. Patent Application Publication No. 2003/0058385 to McKnight ("McKnight"). This rejection is respectfully traversed.

Also, with in the Action, claim 7 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,356,332 to Ichikawa et al. (Ichikawa) in view of U.S. Patent No. 6,853,435 to Tanaka ("Tanaka"), and further in view of U.S. Patent Application Publication No. 2003/0058385 to McKnight ("McKnight"). This rejection is respectfully traversed.

Claims 1 and 7 recite, *inter alia*, a liquid crystal display element..., wherein a twisted nematic type liquid crystal material...satisfies dielectric constant anisotropy $\Delta\epsilon$ of $0 < \Delta\epsilon < 8$ and twist elasticity modulus K_{22} of $K_{22} > 6.0$ pN when the refractive index anisotropy Δn is $.16 \leq \Delta n \geq .18$.

In contrast, although Tanaka arguably discloses a liquid crystal material with a relative dielectric constant of 12.3 (parallel) and of 4.5 (vertical) and an elastic constant k_{22} of 7.5×10^{-12} pN, Tanaka fails to disclose, teach or suggest at least a twisted nematic type liquid crystal material with dielectric constant anisotropy $\Delta\epsilon$ of $0 < \Delta\epsilon < 8$ and **twist elasticity modulus K_{22} of $K_{22} > 6.0$ pN** when the refractive index anisotropy Δn is $.16 \leq \Delta n \geq .18$, as recited in claims 1 and 7. *See, e.g.*, col. 9, lines 1-8. Additionally, although Tanaka arguably discloses a liquid crystal material having a twist elastic constant k_{22} of not more than 10 pN in a later embodiment, Tanaka fails to disclose, teach or suggest at least a twisted nematic type liquid crystal material with a **dielectric constant anisotropy $\Delta\epsilon$ of $0 < \Delta\epsilon < 8$ and twist elasticity modulus K_{22} of $K_{22} > 6.0$ pN** when the refractive index anisotropy Δn is $.16 \leq \Delta n \geq .18$, as recited in claims 1 and 7. *See, e.g.*, col. 21, lines 43-51. Further, although Tanaka arguably discloses liquid crystals with refractive index anisotropy Δn of .138, Tanaka fails to disclose, teach or suggest at least refractive index anisotropy Δn is $.16 \leq \Delta n \geq .18$, as recited in claims 1 and 7. *See, e.g.*, col. 26, lines 60-63.

Likewise, although McKnight arguably discloses a liquid crystal material with a birefringence Δn between .08 and .25, McKnight also fails to disclose, teach or suggest at least a twisted nematic type liquid crystal material with a **dielectric constant anisotropy $\Delta\epsilon$ of $0 < \Delta\epsilon < 8$ and twist elasticity modulus K_{22} of $K_{22} > 6.0$ pN** when the refractive index anisotropy Δn is $.16 \leq \Delta n \geq .18$, as recited in claims 1 and 7. *See, e.g.* page 3, paragraph 37. In fact, McKnight arguably discloses a perpendicular dielectric constant of 4.5, a parallel dielectric constant of 15 and a twist elastic constant k_{22} of 5 pN, contrasted with the dielectric constant anisotropy $\Delta\epsilon$ of $0 < \Delta\epsilon < 8$ and twist elasticity modulus K_{22} of $K_{22} > 6.0$ pN as recited in claims 1 and 7. *See, e.g.*, page 5, table 3.

Furthermore, although Ichikawa arguably discloses an optical system including a reflection-type liquid crystal panel, Ichikawa fails to disclose, teach or suggest at least a twisted nematic type liquid crystal material with dielectric constant anisotropy $\Delta\epsilon$ of $0 < \Delta\epsilon < 8$ and twist elasticity modulus K_{22} of $K_{22} > 6.0$ pN when the refractive index anisotropy Δn is $.16 \leq \Delta n \geq .18$, as recited in claim 7. *See, e.g.*, col. 14, lines 29-65.

Accordingly, because Tanaka and McKnight, either alone or in combination, fail to disclose, teach or suggest each and every limitation of claim 1, a *prima facie* case of obviousness has not

been established, and withdrawal of this rejection is respectfully requested. *See, e.g., In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974); *accord*. MPEP 2143.03. Likewise, because Ichikawa, Tanaka and McKnight, either alone or in combination, fail to disclose, teach or suggest each and every limitation of claim 7, a *prima facie* case of obviousness has not been established, and withdrawal of this rejection is respectfully requested. *Id.*

Moreover, neither Tanaka or McKnight provide sufficient motivation or teaching for combining and modifying the references in the manner suggested in the Action. As established by Federal Circuit precedent, to establish a *prima facie* case of obviousness, the Action must provide some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. *See, e.g., Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985) (“To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references”); *In re Geiger*, 815 F.2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987) (“When a rejection depends on a combination of prior art references, there must be some teaching, suggestion, or motivation to combine the references”; *ACS Hosp. Sys. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984) (“Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination”); *accord*. MPEP 2143.

It is established law that one “cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.” *Ecolochem, Inc. v. Southern Cal. Edison Co.*, 227 F.3d 1361, 1371, 56 USPQ2d 1065 (Fed. Cir. 2000) (citing *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1780, 1783 (Fed. Cir. 1988)). Indeed, “[c]ombining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor’s disclosure as a blueprint for piecing together the prior art to defeat patentability – the essence of hindsight.” *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). Moreover, “[t]he mere fact that references can be combined or modified does not render the

resultant combination obvious unless the prior art also suggests the desirability of the combination.” *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

In the present case, one of ordinary skill would not be led to modify the Tanaka reference to incorporate the liquid crystal layer of McKnight since the McKnight reference discloses selecting certain values of ϕ , β and Δn to optimize brightness and color saturation and Tanaka discloses producing an unstable state before the up-splay or down-splay state to increase the splay bend transition speed in the liquid crystal layer. In essence, the action has failed to point to any portion of either Tanaka or McKnight as suggesting that the liquid crystal layer in Tanaka should include the characteristics of the liquid crystal layer in McKnight.

Accordingly, because neither Tanaka nor McKnight provide sufficient motivation for combining and modifying the references in the manner indicated, the applied art is clearly inadequate, resulting in the Action having failed to satisfy the burden of establishing a *prima facie* case of obviousness. Withdrawal of the rejection of claims 1 and 7 under 35 U.S.C. § 103(a) is therefore courteously solicited.

Dependent Claims 3 and 5:

In the Action, claim 3 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,853,435 to Tanaka (“Tanaka”) in view of U.S. Patent Application Publication No. 2003/0058385 to McKnight (“McKnight”), and claim 5 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,853,435 to Tanaka (“Tanaka”) in view of U.S. Patent Application Publication No. 2003/0058385 to McKnight (“McKnight”), and further in view of U.S. Patent Application Publication No. 2002/0054266 to Nishimura. These rejections are respectfully traversed. Moreover, aside from the novel limitations recited therein, claims 3 and 5, being dependent upon allowable base claim 1, are also allowable at least by virtue of their dependency upon allowable claim 1. Withdrawal of the rejection of these claims is therefore courteously solicited.

Conclusion

For at least the foregoing reasons, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the examiner is respectfully requested to pass this application to issue. If the examiner has any comments or suggestions that could place this application in even better form, the examiner is invited to telephone the undersigned attorney at the below-listed number.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 18-0013, under Order No. SON-2863/CIP from which the undersigned is authorized to draw.

Dated: July 19, 2005

Respectfully submitted,

By

Ronald P. Kananen

Registration No.: 24,104

RADER, FISHMAN & GRAUER PLLC

1233 20th Street, N.W.

Suite 501

Washington, DC 20036

(202) 955-3750

Attorney for Applicant

DC197829